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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,012	12/04/2001	Makoto Kitamura	018976-206	7969

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EXAMINER	
NGUYEN, THUKHANH T	
ART UNIT	PAPER NUMBER
1722	

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/000,012	KITAMURA ET AL.	
	Examiner	Art Unit	
	Thu Khanh T. Nguyen	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *17-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6 and 8-16* is/are rejected.

7)☒ Claim(s) *5,7,20 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Maekawa et al (3,663,147).

Maekawa et al teach a rotary press-molding apparatus, comprising a rotary table (52) for transferring a mold containing a die (401-417) and punch units (51 and 53) with a plurality of upper and lower punches (201-217 and 301-317) to different stages around a circumference in a horizontal plane (col. 3, lines 20-28); a pressing driving mechanism (61-64) for driving the punch units for pressing in the pressing stage; a connecting mechanism (121-123) for connecting punch units to the pressing driving mechanism when the mold is transferred to the pressing stage and for releasing the connection of the punch units; and a unit holding mechanism (51, 53) for holding the punch units while the units are transferred to the next stage.

The apparatus further discloses a charging driving mechanism (82; Fig. 6, 401; col. 3, lines 60-65) for driving the punch units to form a space to be filled with powder in the powder supply stage; a connecting mechanism (7; 201a-217a; 301a-317a) for connecting the punch units to the charging driving mechanism when the mold is transferred to the powder supply stage, and for releasing the connection of the punch units when the mold is transferred to the next stage; and a unit holding mechanism (51, 53) for holding the punch units while the mold is transferred

to the next stage; and a taking-out mechanism for driving the punch units in the formed-product removing stage (10, col. 4, lines 5-14) to take out the formed product; a connecting mechanism (82, 7; 216a, 316a) for connecting the punch units to the taking-out driving mechanism when the mold is transferred to the formed-product removing stage, and for releasing the connection of the punch units when the mold is transferred to the next stage; and a unit holding mechanism (51, 53) for holding the punch units while the mold is transferred to the next stage.

The apparatus also comprises a powder supply means (9) for charging the powder material (8) into the die (401) and a product takeout mechanism (11) for removing the formed product from the die (col. 4, lines 21-23).

3. Claims 1, 3-4, 11, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinzpeter et al (5,350,548).

Hinzpeter et al teach a tablet forming apparatus, comprising a rotary table (52) for transferring mold units of a die and upper and lower punches (53, 54, &56), a pressing driving means (the solenol adjusting device inside the roller 70-76) for pressing the punches at the pressing stages (34, 36), a connecting mechanism (70-76) for connecting the punches to the pressing driving means, a holding unit (58, 60) for holding the punches while the punches are transferred from one state to the others synchoronously with the movement of the rotary table, which houses a plurality of die bores (54; col. 5, lines 28-39), a taking out mechanism (80) for driving the punches to take out the formed product and a connecting mechanism (78) for connecting the punches (53) to the taking out driving mechanism; wherein the connecting mechanism (66, 68, 70-78, and 80a) is provided at each of the pressing driving mechanism, the charging mechanism, and the take-out driving mechanism; and wherein the punches are driving

by the pressing driving mechanism, the charging driving mechanism, and the take-out driving mechanism and the connecting mechanism (Fig. 3). The apparatus also discloses a powder charging mechanism (62), a machining stage (14) for dedusting and trimming the tablets after being formed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al (3,663,147) or Hinzpeter et al (5,350,548) in view of Hudson (4,789,323).

Maekawa et al and Hinzpeter et al disclose a tablet forming apparatus as described above, but fail to disclose that the upper and lower punches each has a first and a second section that are individually driven by a cylinder.

Hudson teaches a ring making apparatus a rotary table (13) for transferring a mold containing a die (16) and a punch units (18, 26) between a powder supply stage (48), a pressing stage (29), and a product removal stage (42; col. 5, lines 6-10); a pressing driving means (12) for driving the punch units at the pressing stage; a charging driving mechanism (48-50); a product take-out mechanism (42); a connecting mechanism (10, 11, 27) for connecting the punch units to the press driving mechanism, the charging driving mechanism, and a product takeout mechanism; a unit holding mechanism (21, 29) for holding the punch units while the units are

transferred to the next stage; wherein the punch units each includes a first and second upper punches (31, 34) and a first and second lower punches (23, 26); and actuators (24, 33, 12) for independently driving the punches.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Maekawa et al and Hinzpeter et al by providing punch units having a first and second upper punch sections and a first and second lower punch sections that are driven by cylinders as taught by Hudson, because the different punch sections would form a product that have different thicknesses or having an opening.

6. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al (3,663,147) or Hinzpeter et al (5,350,548) in view of Hudson (4,789,323) and further in view of Nakagawa et al (5,647,410).

Mackawa et al and Hinzpeter et al disclose a powder pressing apparatus as described above, but fail to disclose the punches are driven by a driving shaft, including a strut, a ball screw, a servomotor and a timing belt.

Nakagawa et al disclose a powdermolding machine, comprising an upper punch (13) and a lower punch (14) being driven by a ball-bearing nut (16, 18), ball bearing screws (12, 15), a servomotor (17, 19) and a timing belt (22, 25).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Mackawa et al or Hinzpeter by providing a punch-driving means including a ball bearing nut, ball bearing screws, a servomotor and a timing belt as taught by

Nakagawa et al, because this driving means with the servomotor and timing belt would enable accurate control the position of the punches toward and away from each other.

7. Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al (3,663,147) or Hinzpeter et al (5,350,548) in view of Bogue et al (5,653,926).

Maekawa et al and Hinzpeter disclose tablet forming apparatus including the die and the punches are rotatable, but fail to disclose that the mold transfer mechanism includes a linear table to transfer the mold linearly along the processing line.

Bogue discloses a linear mold transfer mechanism (70) for automatically transfer the die punches (col. 8, lines 7-9) along a linear processing line.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Maekawa et al or Hinzpeter by providing a linear table as taught by Bogue, because different molding station could be arranged linearly instead of arranged along a rotary table.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al (3,663,147) or Hinzpeter et al (5,350,548) in view of Shapiro (3,677,673).

Maekawa et al and Hinzpeter et al fail to disclose a cleaning stage for removing powder adhering to the die and to the punch units.

Shapiro discloses a rotary press for compressing powder material, comprising a rotary table (36), a plurality of dies (52) with a plurality of punches, a feed means (50), vacuum means

(60) circumferentially located on the upper surface of the rotary table to remove excess powdered material form the mold cavities (col. 4, lines 47-58).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Maekawa et al and Hinzpeter et al by providing a cleaning means as taught by Shapiro, because the cleaning means would remove excess material from the dies and the rotary table to prevent contamination during the molding process.

Allowable Subject Matter

9. Claims 5, 7, 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or suggest an apparatus comprising a connecting mechanism comprising clamp bodies fixed to each of the pressing driving mechanism, the charging driving mechanism, and the taking out driving mechanism, sliding claws movably supported on each of the clamp bodies; and an advancing receding driving mechanism which advances or recedes each of the sliding claws between a clamping position and an unclamping position; a pressing driving mechanism with a connecting mechanism for connecting and releasing the punch units at the pressing stage; a charging driving mechanism with a connecting mechanism for connecting and releasing the punch units at the charging stage, and a taking-out driving mechanism; wherein the charging driving mechanism and the taking-out driving mechanism each including driving shafts

connected to the first and second lower punches and actuators for independently driving the shafts.

Response to Arguments

11. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Maekawa et al and Hinzpeter et al disclose tablet forming apparatus having means for transporting the punches along with the movement of the rotary dies.

Hudson discloses a die punches having different sections that are driven individually by different cylinders. Bogue discloses a linear mold transfer mechanism (70) for automatically transfer the die punches (col. 8, lines 7-9) along a linear processing line. Shapiro discloses a rotary press having a cleaning means to remove excess material from the dies and the rotary table to prevent contamination.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

TN

ROBERT DAVIS
PRIMARY EXAMINER
GROUP ~~1300~~ 1700

2/3/04